



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/700,167	11/03/2003	David W. Brown	U 0132 OS/CRA	3675

23657 7590 04/12/2006

COGNIS CORPORATION
PATENT DEPARTMENT
300 BROOKSIDE AVENUE
AMBLER, PA 19002

EXAMINER

LANG, AMY T

ART UNIT	PAPER NUMBER
----------	--------------

1714

DATE MAILED: 04/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

CM

Office Action Summary	Application No.		Applicant(s)	
	10/700,167		BROWN ET AL.	
	Examiner		Art Unit	
	Amy T. Lang		1714	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>6-15-04</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-3 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In each of claims 1-3, the term "can" renders the claims indefinite because it is unclear whether element Y is actually meant to be present or not. It is suggested that "can" be replaced with "is."

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Dones (US 6,540,942) in view of the evidence given by Gross (US 5,827,453, cited in the IDS of 06/15/2004).

Dones discloses a coating composition (see for example claim 18, column 7). Although Dones does not explicitly disclose its intended use for a metal container coating, in the present case intended use is given no patentable weight. The

Art Unit: 1714

examiner's position is supported by case law, which holds that "where a patentee defines a structurally complete invention in the claim body and uses the preamble only to state a purpose or intended use for the invention, the preamble is not a claim limitation." *Rowe v. Dror*, 112 F.3d 473, 478, 42 USPQ2d 1550, 1553 (Fed. Cir. 1997) and MPEP 2111.02. The use of a pigment in the coating composition is disclosed by Dones (column 4, lines 30-33). Dones further describes the product of two reactants, the first, formula I being $R^4(Y)_3$ (column 1, lines 32-39) where R^4 is an alkanetriyl group containing 3 to 10 carbon atoms and Y is a halogen or the combination of a halogen and an epoxy oxygen. Formula II, the second reactant disclosed is $R^3(EO)_n(PO)_m(BO)_pX$ (column 1, lines 41-54) where R^3 is an organic oxy or thio group having 1 to 36 carbon atoms. X is hydrogen, a mercapto group, an amino group, or a C_1 - C_6 alkylamino group, and n, m, and p are all 0 to 50. The elements EO, PO, and BO are ethylene oxide, propylene oxide, and butylene oxide respectively (column 2, lines 7-10). It is recognized that EO, PO, and BO are in fact the same thing as ethyleneoxy, propyleneoxy, and butyleneoxy respectively. Dones also teaches a mole ratio of formula I:II of 0.4:1 to 2:1 (column 1, lines 62-65), which clearly overlaps the instantly claimed mole ratio. It is the examiner's position that a base-catalyzed reaction of formulas II and I is implicit in Dones since Dones incorporates a reaction process disclosed by Gross (column 3, lines 41-43). In particular, Gross teaches a base catalyzed reaction of formulas I and II in Example I (column 4). In light of the above it is clear that Dones anticipates the present claim.

Art Unit: 1714

5. Claim 2 is rejected under 35 U.S.C. 102(b) as being anticipated by Wiggins (US 6,387,962).

Wiggins discloses a composition comprised of a defoamer and a lubricating oil (column 2, lines 18-37). Although a defoamer is not explicitly recited in the present claim, it is noteworthy that Wiggins' defoamer is a product of two reactants, such that the first reactant is disclosed as epichlorohydrin (column 1, lines 35-37), which clearly overlaps formula I of the instant claim 2. Wiggins discloses the second reactant, shown in Example 1 (column 3), as a decyl alcohol ethoxylated with ethylene oxide. This compound clearly overlaps formula II of the instant claim 2 when X is oxygen and Y is hydrogen in formula II. The reaction between the two elements is disclosed as base-catalyzed (see Example 1, column 3). The mole ratio between epichlorohydrin and the second reactant is disclosed as 0.6:1 to 2:1, which clearly falls within the range stated in the instant claim. Although Wiggins does not explicitly disclose the intended use of the defoamer for a metalworking lubricant, in the present case intended use is given no patentable weight. The examiner's position is supported by case law, which holds that "where a patentee defines a structurally complete invention in the claim body and uses the preamble only to state a purpose or intended use for the invention, the preamble is not a claim limitation." *Rowe v. Dror*, 112 F.3d 473, 478, 42 USPQ2d 1550, 1553 (Fed. Cir. 1997) and MPEP 2111.02. In light of the above it is clear that Wiggins anticipates the present claim.

6. Claim 3 is rejected under 35 U.S.C. 102(b) as being anticipated by US patent of Kaylo (6,290,830).

Kaylo teaches an aqueous electrodepositable composition (column 1, lines 21-23) comprising a film-forming material (column 5, line 66 through column 6, line 5). The disclosed film-forming material contains epihalohydrins reacted with polyhydric alcohols in a base catalyzed reaction (column 8, lines 53-58). It is the examiner's position that the epihalohydrins and polyhydric alcohol fall within the scope of formulas I and II in the present claim. Specified examples of polyhydric alcohols include ethylene glycol and polyoxyalkylene glycol (column 9, lines 1-7). An epihalohydrin, such as epichlorohydrin, satisfies the conditions of formula I of the instant claim 3. Referring to formula II in the instant claim 3, when n is equal to zero, Y is hydrogen, X is oxygen, and R^2 is the residue of ethyl alcohol (i.e. $\text{HOCH}_2\text{CH}_2-$), the resultant compound is ethylene glycol. When n does not equal zero, a polyoxyalkylene glycol is produced. The present electroplating composition disclosed by Kaylo contains a lead metal ion (see Example 1, column 13), hence the claimed requirement of metal is met (which, incidentally includes metal ions, see pg. 27 of spec). In light of the above it is clear that Kaylo anticipates the present claim.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
8. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Larsen (US 2,375,007) in view of Dones (US 6,540,942).

Larsen discloses a composition of a defoamer and a lubricating oil (column 1, lines 42-54) that is used as a lubricant in various machines (column 1, lines 11-41 and 48-54). This combination reduces the amount of foam and froth build-up in engines that can cause vapor locking of the pressure pumps and a decrease in oil pressure (column 1, lines 10-41). Not only does Larsen teach the lubricant oil, i.e. component (A) of the instant claim, he also teaches the combination of the lubricant oil and the defoamer in a nonaqueous solution (column 3, lines 51-56) However, Larsen's "defoamer" is not the same as the base-catalyzed reaction product in the instant claim 2.

Dones, as stated in paragraph 4 is incorporated here by reference, discloses a defoamer composition which is relevant to the present invention in that it is identical to the base-catalyzed reaction product in the present claim. Dones teaches the use of the defoamer as a coating composition (see claim 18, column 7) and, in particular, states the defoamer to be an excellent coating composition by also acting as a flow and leveling agent (column 4, lines 46-57). Given that coating compositions encompass

Art Unit: 1714

lubricants, where the advantage imparted by flow and leveling agents would be beneficial, it therefore would have been obvious to combine a lubricating oil, such as that disclosed by Larsen, with the defoamer composition disclosed by Dones.

9. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kaylo (US 6,290,830) in view of Dones (6,540,942).

The discussion of Kaylo and Dones as set forth in paragraph 6 and 4, respectively, are incorporated here by reference. Kaylo discloses an electrodepositable composition where a polyhydric alcohol reacts with an epihalohydrin. However the polyhydric alcohol is not substituted with a terminal amino or mercapto group. Dones teaches a defoamer that is actually a base-catalyzed reaction product of a polyhydric alcohol, within the scope of substituting with a terminal amino, mercapto, or C₁-C₆ alkylamino group, and an epihalohydrin. The reaction product disclosed by Dones is taught as an excellent coating composition by also acting as a flow and leveling agent (column 4, lines 46-57). Since Kaylo and Dones both teach a base-catalyzed reaction product, and the product disclosed by Dones is excellent and effective, it therefore would have been obvious at the time of the invention to replace the polyhydric alcohol disclosed by Kaylo by the substituted polyhydric alcohol taught by Dones, for the advantage described by Dones.

10. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kaylo (US 6,290,830) in view of Dones (6,540,942) and Deresh (US 4,849,059).

The discussion of Kaylo and Dones as set forth in paragraph 6 and 4, respectively, are incorporated here by reference. Kaylo discloses an aqueous

Art Unit: 1714

electrodepositable composition comprised of a metal. Dones teaches a defoamer that is actually a base-catalyzed reaction product, and clearly overlaps on component (B) of the instant claim 3. Dones' defoamer is disclosed as providing excellent defoaming actions (column 4, lines 47-57). Deresh teaches electrodeposition of tin and lead with an aqueous electroplating bath comprised of a bath soluble metal salt and a defoaming agent (column 2, lines 42-54). Deresh discloses that defoaming agents are an advantageous addition to an electroplating composition, as they reduce foam formation, which can cause non-uniform plating (column 1, lines 57-63). Therefore, the further addition of a defoamer to the electroplating composition disclosed by Kaylo would be advantageous. Since Dones discloses an excellent defoamer, it would be obvious to include this defoamer in the electroplating composition taught by Kaylo.

11. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kaylo (US 6,290,830) in view of Gross (US 6,532,973).

The discussion of Kaylo as set forth in paragraph 6 is incorporated here by reference where Kaylo discloses an electrodepositable composition of a polyhydric alcohol reacting with an epihalohydrin. However the polyhydric alcohol is not substituted with a terminal amino or mercapto group. Gross teaches an aqueous defoamer that is actually the base-catalyzed reaction product of two elements, $R^4(Y)_3$ and $R^3(EO)_n(PO)_m(BO)_pX$. It is disclosed that R^4 is an alkanetriyl group containing 3 to 10 carbon atoms, Y is a halogen atom or a combination of a halogen and an epoxy group, R^3 is an aliphatic oxy group having 1 to 36 carbon atoms, X is hydrogen or a mercapto or amino group, and n, m, and p are each from 0 to 50 (column 1, line 58

Art Unit: 1714

through column 2, line 62). The elements EO, PO, and BO are ethylene oxide, propylene oxide, and butylene oxide respectively (column 2, lines 25-27). It is recognized that EO, PO, and BO are in fact the same thing as ethyleneoxy, propyleneoxy, and butyleneoxy respectively. Therefore, it is clear that $R^4(Y)_3$ clearly overlaps formula I in the instant claim 3. As for formula II in the instant claim, the element $R^3(EO)_n(PO)_m(BO)_pX$, as disclosed by Gross, clearly overlaps. The reaction of the two elements as disclosed by Gross is base-catalyzed (see Example 1, column 12), and within a mole ratio of 0.2:1 to 5:1 (column 2, lines 19-22), which clearly overlaps the instant claimed 3. Therefore, Gross teaches a polyhydric alcohol, capable of a terminal substitution with an amino or mercapto group. The reaction product, as taught by Gross, is disclosed as an excellent foam reducer in a wide range of applications (column 11, lines 23-49). Since Kaylo and Gross both teach a base-catalyzed reaction product, and the product disclosed by Gross is excellent and effective, it therefore would have been obvious at the time of the invention to replace the polyhydric alcohol disclosed by Kaylo by the substituted polyhydric alcohol taught by Gross, for the advantage described by Gross.

12. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kaylo (US 6,290,830) in view of Gross (US 6,532,973) and Deresh (US 4,849,059).

The discussion of Kaylo and Gross as set forth in paragraph 6 and 11, respectively, are incorporated here by reference. Kaylo discloses an aqueous electrodepositable composition comprised of a metal. Gross teaches an aqueous defoamer that is actually a base-catalyzed reaction product, and clearly overlaps on

Art Unit: 1714

component (B) of the instant claim 3. Gross' defoamer is disclosed as an excellent foam reducer in a wide range of applications (column 11, lines 23-49). Deresh teaches electrodeposition of tin and lead with an aqueous electroplating bath comprised of a bath soluble metal salt and a defoaming agent (column 2, lines 42-54). Deresh discloses that defoaming agents are an advantageous addition to an electroplating composition, as they reduce foam formation, which can cause non-uniform plating (column 1, lines 57-63). Therefore, the further addition of a defoamer to the electroplating composition disclosed by Kaylo would be advantageous. Since Gross discloses an excellent defoamer, it would be obvious to include this defoamer in the electroplating composition taught by Kaylo.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Wiggins (US 6,123,990) teaches a lubricant composition comprised of a polyether and epichlorohydrin. Hsu (US 4,765,871) teaches an electroplating composition with the presence of a polyoxyalkylated compound.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amy T. Lang whose telephone number is 571-272-9057. The examiner can normally be reached on M-F 8:30am-5:00pm.

Art Unit: 1714

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 571-272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ATL

Amy T. Lang

04/07/2006

Vasu Jagannathan
VASU JAGANNATHAN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700

